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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,224	03/22/2004	Long Yu	21854-00019-US1	9134

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EXAMINER	
NUTTER, NATHAN M	
ART UNIT	**PAPER NUMBER**
1711	

DATE MAILED: 02/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/805,224	YU ET AL.	
	Examiner	Art Unit	
	Nathan M. Nutter	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 December 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11-25* is/are pending in the application.

4a) Of the above claim(s) *18 and 19* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-17 and 20-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. *11-05*.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The following is placed in effect in response to the amendment of 1 December 2005.

Claims 18 and 19 are drawn to a method of making the composition of the Group I claims, and are not being examined at this time. The elected, and examined, claims are 11-17, 20 and 21, and newly added claims 22-25.

The rejection of claims 11-17, 20 and 21 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, is hereby expressly withdrawn, as proffered in the previous Office Action.

The following rejections are being maintained and new grounds of rejection are added.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> **The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.**

Claims 11-17, and 20-25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The concept "adapted to thermoform" is neither taught nor can be

ascertained from the Specification, as filed. This concept is not disclosed in the Specification.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-17 and 20-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "adapted to thermoform" is meaningless in context with the Specification. The Specification fails to teach what the proper metes and bounds of this phrase might entail. It is not clear what is meant by "adapted," in particular. Nothing can be seen to support such a recitation. As such, the claimed subject matter is incomplete and, hence, fails to particularly point out and distinctly claim what applicants regard as the invention. Since the recitation omits essential elements, steps or necessary structural cooperative relationship of elements, that is "adapted", such omission amounts to a gap between the elements, steps or necessary structural connections. Note MPEP 706.03(f) and 608.01(n).

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application

> by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 11-17 and 20-25 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Peltonen et al (US 6,780,903) or Haasmaa et al (US 6,656,984).

The patents to Peltonen et al (US 6,780,903) and Haasmaa et al (US 6,656,984) both teach the manufacture of a biodegradable resin composition having the constituents recited and within ranges as recited herein. Peltonen et al (US 6,780,903) show hydroxyalkyl starch at the paragraph bridging column 4 to column 5. Note column 4 (lines 24-38) for the stearic acid, column 5 (lines 3-14) for the use of a polyol plasticizer, column 5 (lines 28-37) for the use of polyvinyl alcohol. Note the many Examples. The constituents are disclosed at column 5 (lines 38-43) and the Examples

to be within the limits as claimed, except the stearic acid component. Since this component is recited for the same use as disclosed herein, an artisan would know to employ a suitable amount. As such, the instant claims are deemed to be at least obvious, if not anticipated, by the teachings of the patent. The reference to Haasmaa et al (US 6,656,984) shows a maleic anhydride starch used with polyvinyl alcohol, water, glycerol esters and stearates. Note column 3 (lines 58-65) for the modified starch, column 3 (lines 39-57) for the stearates, column 4 (lines 5-16) for the glycerol ester, and oils in general and column 4 (lines 17-27) for the polyvinyl alcohol. Note column 4 (lines 28-48) for the compositional limitations which are deemed to overlap with those recited herein. Again, the stearic acid component is not disclosed as to compositional limitations. Since this component is recited for the same use as disclosed herein, an artisan would know to employ a suitable amount. As such, the instant claims are deemed to be at least obvious, if not anticipated, by the teachings of the patent.

Claims 11-17 and 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silbiger et al (US 6,248,838), taken in view of Buehler et al (US 5,316,578) and Frische et al (US 5,374,304).

The reference to Silbiger et al (US 6,248,838) shows the employment of hydroxyalkyl starch at a presence of from 3 to 50 % by weight, polyvinyl alcohol at a presence of from 5 to 40 % by weight, water at about 6 to 20% by weight, glycerol at a level of 0.5 to 40 % by weight, and starch. Note the paragraph bridging column 3 to column 4, column 6 (lines 19-63) for the PVA, HA starch and glycerol plasticizer. Note

column 8 (lines 17 et seq.) for the additional un-modified starch. The reference fails to teach the employment of a fatty acid or salt, as claimed.

The reference to Buehler et al (US 5,316,578) shows the employment of hydroxyalkyl starch at an unspecified range, though the product is drawn to a starch melt indicating major quantities, and by calculation of the other constituents as to their respective inclusions, would certainly be within the range recited and claimed herein. Water is present at about to 12% by weight, glycerol at a level of 4.8-39.8% by weight, and metal stearate at a level of 0.1 to 2% by weight. Note column 3 (lines 7-45) for the HA starch, water, plasticizer and metal stearates. The reference fails to show the inclusion of a PVA constituent.

The patent to Frische et al (US 5,374,304) shows the employment of hydroxyalkyl starch at a presence of from 60 to 97 % by weight, polyvinyl alcohol at a presence of from 3 to 40 % by weight, water, glycerol at a level of 3 to 40 % by weight. Note column 4 (lines 1-39) and the Examples. The patent fails to show the fatty acid or salt.

The references taken together show the conventionality of the constituents employed and that these constituents are used in essentially overlapping, inclusive parameters as those recited and claimed herein. The several components, thus, have conventional and known uses to those having an ordinary skill in the art as regards the production of biodegradable compositions, as disclosed and recited herein. Further, since these constituents would not be found in any one reference, interpolation of the exact weight percentages for each separate compound need not be shown by any of

the several references included in the rejection. The various components are shown by the references to be known in the production of biodegradable composites and would be used in accordance with the desired characteristics of the final composition as well as cost, availability and other factors of manufacturing and handling. Manipulation of the various components as to inclusion parameters would have been obvious modifications to an artisan in view of these considerations. As such, the instant claims are deemed to be obvious over the teachings of the references. No unexpected results have been shown on the record relating to any particular component or inclusion of any components.

Response to Arguments

Applicant's arguments filed 1 December 2005 have been fully considered but they are not persuasive.

The recitations of the claims of "consisting essentially of....in percent by weight," are not relevant to the rejections as presented since these rejections were made under 35 USC 102 and 35 USC 103. The references teach the constituents which may be used in ranges including those recited herein. All of the constituents are employed in their art-recognized capacities and are disclosed variously for the identical uses as contemplated herein, i.e. production of articles. A skilled artisan would know what articles could be produced from such composition. Further, regardless of the form, i.e. dispersion, emulsion, solution, the constituents are employed in their art-recognized capacities. The specific form of the composition is not deemed to lend patentability to the instant claims since a skilled artisan would know when to employ a dispersion,

emulsion or a solution. The recitation of "consisting essentially of" fails to remove Silbiger et al as a suitable reference since the rejection was made under 35 USC 103, and not under 35 USC 102, as argued by applicants. A skilled practitioner would know how to and when to limit inclusion of constituents. Nothing unexpected or surprising has been shown by applicants' attempt to exclude Silbiger et al. As such, the rejections, as put forth above, are deemed to be sound.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan M. Nutter whose telephone number is 571-272-1076. The examiner can normally be reached on 9:30 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nathan M. Nutter
Primary Examiner
Art Unit 1711

nmn

14 February 2006